

But how probable soever such a successive change and advance in perfection may be, the geological facts cannot be adduced, without alteration and interpolation, as confirming the doctrine of a continuous change of beings, such as would be required to establish a development by which more complicated forms are the offspring of more simple prototypes. Such a view would require another distribution of fossils in the succeeding strata—so that, for instance, fossil Cephalopods should be the latest of all mollusks, and not, as they really are, already represented in the oldest fossiliferous rocks. If the species have changed by degrees, we should expect to find traces of this gradual modification. If one form gave birth to another, why should we not find some fossils between mollusks, or insects, and Vertebrata? Such a discovery has never been made.

It is plain, if we are sincere and unbiassed observers, that geological facts give no support to those hypotheses we have been treating of, and that they rather militate against such theories, which cannot deserve the name of *natural* theories at all. Creation, the first origin of things, is, and perhaps always will be, a mystery; the mystery is by no means elucidated if we assume germs. The first animal, for instance, that possessed organs of vision has to be derived from another without eyes. But why should such a supposition seem clearer and more intelligible than the creation of an entire animal provided with eyes? Here science does not shut her books, as it has been said by some: true science never opened books on such questions.

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

Dec. 8, 1863.—E. W. H. Holdsworth, Esq., F.Z.S., in the Chair.

ON THE BREEDING OF THE GREEN SANDPIPER (*HELODROMAS OCHROPS*). BY ALFRED NEWTON, M.A., F.L.S., F.Z.S.

Ornithologists are aware of the very different positions often chosen for their nests by birds of the same species. Thus Eagles may be found sometimes building their eyries upon trees, at others on cliffs, and again sometimes absolutely upon the flat ground. The same may be said of some species of Falcons and of some Herons. Certain Crows also and the Stock-Dove (*Columba (Enas)*) exhibit a like disparity of habit. Even among the members of the Gallinaceous order a similar diversity is occasionally, though rarely, to be observed. I have been told, on authority I cannot question, of a common Pheasant (*Phasianus colchicus*) and of a Capereally (*Tetrao Urogallus*) each choosing a nest in a tree wherein to lay its eggs. Instances of the common Wild Duck (*Anas Boschas*) breeding in hollow stumps

of trees are very frequent; and with the Ducks of the genus *Aix* this seems to be the normal mode of nidification. But, excepting in the last case, this peculiarity in the selection of a site for the nest seems to result from the particular fancy (or instinct, it may be) of the individual; and in that exceptional case the general habits of the birds are so essentially arboreal that we need not wonder at the fact of their using trees for their nurseries as well as for their usual places of lodging. The only instances parallel to the one I am going to adduce are, so far as I can call to mind, those of the Golden-eye (*Clangula Glaucion*), the Goosander (*Mergus Serrator*), and the Smew (*Mergus Albellus*). Each of these three birds departs from the manner of nidification which obtains among its brethren, just as I shall show that the Green Sandpiper (*Helodromas ochropus*†) does.

Though I do not pretend to lay before you any novel facts this evening, yet it will be, I think, admitted that hitherto we have had in England but little positive information on the mode of breeding of the Green Sandpiper; such as it is, however, I will proceed to notice it. First, I must say that I think the story of the nest of this bird “by the side of a clay-pit” in Norfolk, as told in Mr. Yarrell’s ‘British Birds’ (vol. ii. p. 529) and in Mr. Lubbock’s ‘Fauna of Norfolk’ (p. 75), can hardly be relied on—not, of course, that there is the slightest reason to doubt the implicit good faith of Sir Thomas Bevor, on whose authority it appears to rest. Next there is the statement contributed to the last edition of Mr. Hewitson’s ‘Eggs of British Birds’ (ed. 3. vol. ii. p. 334*) by Mr. Tristram, to the effect that he found the species breeding near sluggish streams or mountain tarns between Bodö and Quickjock in Lapland. Now this particular district has since been visited by three other excellent observers, to no one of whom did the Green Sandpiper reveal itself. I therefore hope I may be pardoned for suggesting the possibility of a mistake in my friend’s assertion.

In the ‘Naumannia’ for 1851 (vol. i. part 2, p. 50), Herr Pässler mentions that he had, through his friend the Oberförster Wiese, obtained an egg of *Totanus glareola*, with the remark that this species of Sandpiper always “nests upon a tree;” but in the same periodical for 1852 (vol. ii. part 1, p. 95) he states that Baron von Homeyer had informed him that the egg in question was not that of *T. glareola*, but of *T. ochropus*, and adds that during his stay at Haff he had seen many nesting-places of this latter species; they were on the borders of “Elsenbrüche” [quare, swamps of the Service-tree (*Pyrus domestica*)?], in the middle of the forest, where the trees stand upon hillocks. In the ‘Journal für Ornithologie’ for 1855 (vol. iii. p. 514), the above-mentioned Herr Wiese, writing on the Ornithology of Pomerania, especially in the district of Cöslin, says that he had first heard from an old sportsman, who knew the peculiarities of all the forest-animals, that the *Totanus ochropus*

† The osteology of the *Tringa ochropus*, Linn., presents such a marked deviation from that of the other *Totani* which I have examined, that I do not hesitate in this case to follow Dr. Kaup in considering it the type of a distinct genus.

nested in old Thrushes' nests, which information, he remarks, "I naturally did not believe;" but he states that some years after, in 1845, he obtained from the same man four fine eggs of a bird of this species, which for many years had been wont to nestle in an old beech tree. Still doubtful on the subject, the following spring he himself found a nest of the bird on a pine which had a fork about five-and-twenty or thirty feet high. "Joyfully," he says, "I climbed the tree, and found in that fork four eggs on a simple bed of old moss." He goes on to say that in the spring of 1853 he again obtained four eggs of the same species; and in the spring of 1854 (the year he was writing) he found a nest placed in the old nest of a Song-Thrush, out of which the shed buds of the beech had not so much as been removed. There were four eggs, which were hard sat upon on the 25th of May.

In the 'Naumannia' for 1856 (vol. vi. p. 34), in an account of an excursion in Western Pomerania ("*Vorpommern*"), Dr. Altum states that *Totanus ochropus* returns annually to its old nesting-places, these being Missel-Thrushes' nests, whose remains were still to be seen, often some hundred yards distant from the nearest pool, and their height fifteen feet or more from the ground. The same journal for 1857 contains a valuable series of observations on the birds of the same district by Herr W. Hintz, in which the author says (vol. vii. part 1, p. 14) that on the 6th of May, 1855, he found three eggs of this bird on an "*Else*" [quære, *Pyrus domestica*?] in an old Dove's nest, as he thinks, though he states it might have been that of a Jay. Formerly, he proceeds to remark, he had only observed this Sandpiper to use old nests of *Turdus musicus*, excepting once, when he found some young ones, only a few days old, hard by a river-bank on a layer of pine-needles on an "*Else*"-stub.

Soon after the publication of this last piece of intelligence, appeared that part of Herr Bädcker's 'Eier der Europäischen Vögel,' wherein (fol. xxx. no. 5) *Helodromas ochropus* was treated of, and a concise summary of the foregoing accounts was given. This was remarked upon by the writer of an article in 'The Ibis' for 1859 (vol. i. p. 405), and thus the curious facts which I have above detailed were made generally known, for the first time I believe, to English readers. In 1860 a short recapitulation of them was also published by my friend Dr. Baldamus, in the continuation of Naumann's celebrated 'Vögel Deutschlands' (vol. xiii. p. 241). Towards the close of the same year also that excellent observer who veils his name under the signature of "An Old Bushman" contributed a series of articles to 'The Field' newspaper, in which he described his own experience of the Green Sandpiper's way of nesting in Sweden. The natural-history editor of that paper, not knowing what had been already written, exhibited some signs of scepticism on the subject, whereupon his correspondent reiterated his statement, saying (Field, No. 411, Nov. 10, 1860, p. 393) that "there is no doubt about the matter," and adding that he "never took the nest on the ground."

I have now only to read to you a portion of a letter, dated Novem-

ber 27, 1861, which I received from my friend Pastor Theobald, of Copenhagen. He says as follows:—

“The nidification of *Totanus ochropus* is so remarkable that I do not fear to trouble you with the history the Forester Hintz [whom I have mentioned above] has given me. He writes:—‘This year I succeeded in finding the nest of *Totanus ochropus*. On the 9th of May I took four eggs of this bird; they were found in an old nest of *Turdus musicus*, and seemed to have been incubated about three days. The very same day there were brought to me four other eggs of this bird, also found in a Thrush’s nest. * * * The 10th of May there was shown to me a nest, thirty feet high, on an old birch, the bird having chosen an old decayed nest of a Squirrel. This nest was the highest I have ever seen. Three young ones had just been hatched; in the fourth egg the bird was about to break the shell. One jumped down and concealed itself on the edge of a water-pool. The 11th of May a nest with four fresh eggs was found, but they did not come into my hands; this was in an old Pigeon’s nest on a *Pinus rubra*, and full of dry pine-leaves. The 20th of May two eggs, almost burst by the young, were found in an old Thrush’s nest, the two missing birds having most likely already left the nest. The 22nd of May four young ones, apparently but a few hours old, were found in the old nest of a *Lanius Collurio*, in a juniper three feet high. The 24th of May four young ones were found in the hole of a *Populus tremula* thrown down by the wind. The year before, *Muscicapa luctuosa* had its nest in the trunk as it lay on the ground; this year *Totanus ochropus* had chosen the same opening. When I approached the trunk, the young ones, perhaps four-and-twenty hours old, jumped away and hid themselves in the grass among the branches. All these nests were near the water—two on the edge of a rivulet, the others on wet morasses, the distance from the water being at most six feet.’”

I have the pleasure of exhibiting to you a small series of a score of the eggs of this bird, as well as three nests. The latter were sent me by Mr. H. W. Wheelwright, and were obtained by him this year in Sweden. They are so ragged and dilapidated that, as is often the case with ancient ruins, it is not easy to say of what race the builders were. From one of them, five-and-twenty feet up in a fir tree, the mother was killed on the 28th of May, and I produce her skin. Three of the sets of eggs belonged to these nests; a fourth set was the contents of Forester Hintz’s nest of the 9th of May 1861, mentioned in his interesting letter. This I owe to Mr. Theobald and some other friends in Copenhagen. The remaining four eggs are odd ones obtained by Mr. Wolley and myself from Dr. Kjærboilling.

Jan. 26, 1864.—E. W. H. Holdsworth, Esq., F.Z.S., in the Chair.

An extract was read of a letter from Dr. Harry Anthony to Mr. Louis Fraser, dated Brass River, Bight of Biafra, 3rd Dec. 1863, referring (as follows) to what was supposed to be a species of *Clarias*:—

“I intend to try and send you by my next ship some of the ‘Black

Fish' out of the bush, called by the natives Egalegala; they are perfectly black, and are very fine eating. They are so fat they will fry without butter, taste something like eels; they are in shape something like 'Cat-fish,' with filaments from the lower jaw; they live amongst the mud in the mangrove bush. It would be grand to acclimatize them; they are such fine eating. They would drive eels out of the market."

DESCRIPTION OF ASPIDIOTES MELANOCEPHALUS, A NEW SNAKE FROM PORT DENISON, N.E. AUSTRALIA. BY GERARD KREFFT, ACTING CURATOR AND SECRETARY, AUSTRALIAN MUSEUM, SYDNEY.

Fam. BOIDÆ.

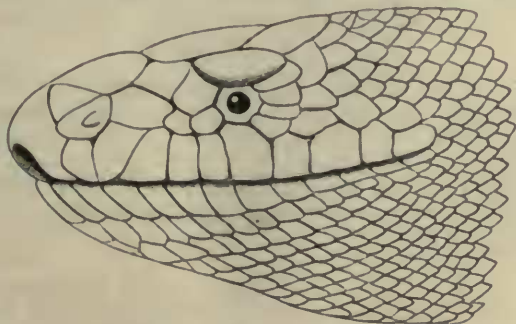
ASPIDIOTES, nov. gen.

Crown covered with broad shields reaching behind the eyes; the remaining part of the head scaly; labial shields without pits, the front ones high and narrow, the hinder shields lower and broad. Nostrils lateral, in the middle of a plate, two loreals, two anterior and four posterior oculars; superciliaries broad, rather prominent above the eye; nasal shield very large, much produced backwards, and deeply grooved on its lower edge. Scales smooth, in fifty-two series on the middle of the body; ventral plates rather narrow; subcaudals entire, except the last ten or twelve, which are divided. Tail conical, prehensile, ending in a blunt point. Head rather high, of moderate size; teeth not very large (smaller than in *Morelia*). Body thick and compressed.

ASPIDIOTES MELANOCEPHALUS.

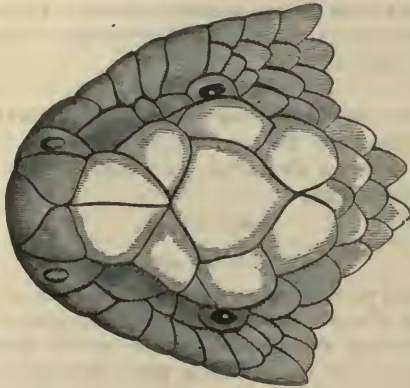
Scales in 52 series on the middle of the body. Ventral shields narrow, 330. Anal entire. Subcaudals $51\frac{13}{13}$.

Head rather high; body thick and compressed; tail conical, tapering, prehensile, ending in a blunt point; anal spurs small; ten upper



labials, the sixth coming into the orbit; two anterior and four posterior ocular shields; two loreals, the second nearest to the eye very small; one nasal, pierced by the nostril; eye moderate, pupil ellip-

tical, erect. Three pairs of frontal shields, the middle pair longest ; vertical broad, the largest shield of the head, with an obtuse angle in front and an acute one behind, sides rounded ; superciliaries



large, prominent above the eyes ; occipitals distinct, but smaller than the vertical, forked and rounded behind ; the first pair of frontals small, triangular ; the second pair five-sided, nearly as large again as the first pair ; the third smaller than the second and larger than the first, quadrangular. Of the fourteen lower labial shields, the first seven are narrow and elongate, the rest broad ; no groove upon the labials. The nasal shield is very broad, with a deep pit, shaped like a bean, and much produced backwards. Head moderate ; body thick, compressed ; anal spurs small. Colour light brown, with a series of darker rings, which become indistinct near the sides ; below yellowish-white here and there, with a few dark blotches ; head and neck jet-black above and below. Total length 7' 10".

Hab. Port Denison.

DESCRIPTION OF A NEW SPECIES OF MORMYRUS.

BY DR. A. GÜNTHER.

Only a short time ago I described* a peculiar species of *Mormyrus*, *M. Petersii*, distinguished by a very long mandibular flap. I have the pleasure to lay to-day before the Society another species with the same structure of the fins, and with a similar prolongation of the lower jaw. It comes, like *M. Petersii*, from West Africa. The peculiar form of the snout has suggested the specific name of

MORMYRUS TAMANDUA.

D. 28. A. 31. V. 6. L. lat. 80. Body compressed, rather elongate—its greatest height, between the origin of the dorsal and anal fins, being two-ninths of the total length (without caudal) ; the length of the head is one-fourth of the same. The snout is much

* Wieg. Arch. 1862, p. 64.

prolonged, tubiform, slightly tapering, and curved downwards, the distance between the eye and the end of the mandibular flap being twice that between the eye and the gill-opening. The mouth is very small, at the extremity of the snout, with the jaws equal, and armed with two pairs of feeble conical teeth above and below. The mandibular flap is as long as the eye. The eye is covered with the skin, but appears through from below it. The pectoral is nearly twice as long as the ventral, and extends beyond its base. The dorsal and anal fins are opposite each other, and placed on the caudal portion of the body, the origin of the former being in the middle between the occiput and the root of the caudal. The scales on the trunk are rather small and irregularly arranged, but become gradually larger and more regular posteriorly. Coloration uniform.

The single specimen obtained is 10 inches long.

We add, for comparison, the diagnosis of the other species mentioned above:—

MORMYRUS PETERSII.

D. 27. A. 34. L. lat. 66. The mandible is prolonged into a long, conical fleshy appendage, which is nearly half as long as the head. Dark brown, with two lighter cross bands.

Hab. Old Calabar.

ON SOME NEW SPECIES OF CENTRAL-AMERICAN FISHES.

BY DR. A. GÜNTHER.

Our Corresponding Member Capt. J. M. Dow having sent to this Society a second collection of Central-American Fishes, a complete series of the species contained therein has been deposited by our Secretary in the British Museum. The following is a list of those which I have examined, a few others having been omitted, as they belong to families in the revision of which I am engaged at present or shall be in a very short time:—

I. Species collected on the Pacific Coast of Panama.

1. SERRANUS SELLICAUDA, Gill, sp.
2. RHYPTICUS MACULATUS, Holbr.
3. MESOPRION NOVEM-FASCIATUS, Gill, sp. Very closely allied to *M. griseus*.
4. MESOPRION, n. sp. There are two young specimens of an apparently undescribed form in the collection; but the description and determination are better deferred until more examples have been obtained.

5. PRISTIPOMA MELANOPTERUM, C. & V.

6. PRISTIPOMA DOVII, n. sp.

D. $\frac{12}{16}$. A. $\frac{3}{9}$. L. lat. 48. L. transv. 8/15. The height of the body is one-half of the total length (without caudal); the length of

the head one-third. Snout obtuse, not much longer than the eye; cleft of the mouth small, the maxillary extending to the vertical from the anterior margin of the orbit. Lips thick; a pair of pores on the symphysis of the lower jaw, a central groove behind it. Snout naked, the remainder of the head being scaly. The width of the interorbital space is much less than that of the orbit. Dorsal and anal spines exceedingly strong; the third of the dorsal fin is the longest, and nearly two-thirds as long as the head. The second anal spine is much longer than the third, and a little shorter (but stronger) than the third of the dorsal fin. Each ray of the soft fins is accompanied by a series of minute scales, but only on the caudal fin are these scales dense enough to cover the rays. Caudal fin slightly emarginate. Silvery, with four black cross bands: the first runs from the occiput through the eye to behind the angle of the mouth; the second from before the dorsal fin to below the base of the pectoral; the third from the base of the sixth, seventh, and eighth dorsal spines to the vent; the fourth descends from the origin of the soft dorsal to that of the soft anal. Fins blackish.

Only one specimen, $8\frac{1}{2}$ inches long, is in the collection.

7. *POLYNEMUS APPROXIMANS* (Lay & Bennett ?).

D. $7\frac{1}{13}$. A. $\frac{3}{15}$. L. lat. 60.

8. *CARANX*, n. sp. There is a young specimen in the collection which appears to belong to an undescribed species closely allied to *C. Carangus* and *C. Hippos*.

9. *CARANX LEUCURUS*, n. sp.

D. $8\frac{1}{28}$. A. $2\frac{1}{24-26}$. Very closely allied to *C. bicolor*. The first dorsal fin is composed of short, stoutish spines, the fourth of which is the longest, but scarcely longer than the eye. The soft dorsal and anal are rather elevated; the caudal is emarginate, and has the lobes rounded. Teeth very small, forming a single series in both jaws; palate smooth. The height of the body is one-half of the total length (without caudal), the length of the head one-third. Snout rather obtuse, the jaws being equal in front when the mouth is closed; the maxillary extends to below the anterior margin of the orbit. The lateral line makes anteriorly a subsemicircular curve, the width of which is contained from $1\frac{2}{3}$ to $1\frac{4}{5}$ times in the length of the straight portion; it becomes straight behind the vertical from the origin of the second dorsal, and is armed with about fifty small and low shields, only a few of which terminate in a depressed spine. The pectoral fin extends to the anal spines. Brownish grey, body with six dark-brown vertical bands: the first crosses the body behind the base of the pectoral, and the fourth descends from the middle of the soft dorsal fin. Operculum with a large black spot. Dorsal, anal, and ventral black; pectoral and caudal whitish.

Only two young specimens are in the collection, the larger being 3 inches long.

10. ? *CARANX DORSALIS*, Gill, sp.

11. *Gobius SOPORATOR*, Cuv. & Val.

12. *ELEOTRIS SEMINUDUS*, n. sp.

D. 7|11. A. 9. The head and the trunk are naked; the tail is covered with small scales; head depressed, broader than high, flat above, its length being two-sevenths of the total. Snout rather obtuse, longer than the eye, with the lower jaw somewhat prominent; the cleft of the mouth extends to below the anterior margin of the orbit. Teeth in the upper jaw in a narrow band; the lower has four somewhat larger and recurved teeth in front, the others appear to form a single series; palate toothless. None of the fin-rays are prolonged; the pectoral does not quite extend to the origin of the second dorsal; ventral much shorter than pectoral, its inner ray is the longest, the others gradually decreasing in length outwards; caudal fin rounded. Brown, with numerous well-defined white cross stripes on the head as well as on the body; vertical fins black.

Although there is only a single example, 20 lines long, in the collection, the characters of this species are so well marked that I do not hesitate to describe it.

13. *SALARIAS ATLANTICUS*, Cuv. & Val.

14. *CLINUS DELALANDII*, Cuv. & Val.

15. *CLINUS MACROCEPHALUS*, Gthr.

16. *CREMNOBATES MONOPHTHALMUS*, Gthr.

17. *ATHERINICHTHYS PACHYLEPIS*, n. sp.

D. 4| $\frac{1}{8-8}$. A. $\frac{1}{20-21}$. L. lat. 41. L. transv. 7. The height of the body is nearly equal to the length of the head, and contained five times and a half or five times and a third in the total length (without caudal). The snout is short, not longer than the diameter of the eye, and the cleft of the mouth does not extend backwards to below the anterior margin of the eye. The anterior dorsal is composed of short, feeble spines, and its origin is opposite to the fourth or fifth anal ray. The pectoral fin is much longer than the head. The silvery streak occupies the adjoining halves of the third and fourth series of scales.

Two specimens, 6 inches long, were in the collection.

18. *MUGIL BRASILIENSIS*, Agass.

19. *MUGIL PROBOSCIDEUS*, Gthr.

20. *GOBIESOX RHODOSPILUS*, n. sp.

D. 6. A. 5. C. 8-9. P. 17. A vertical fold of the skin along the lower half of the base of the pectoral; the coracoid is scarcely below the level of the upper margin of the pectoral. The distance of the origin of the dorsal fin from the caudal is contained twice and

two-thirds in its distance from the snout ; the anal commences below the third dorsal ray. A very narrow band of short conical teeth in the upper jaw—one of the lateral teeth being somewhat larger than the others, recurved, canine-like. The lower jaw with a single series of teeth, the anterior being narrow incisors, whilst the outermost on each side is distinctly a canine tooth, corresponding to that in the upper jaw. Rose-coloured, with dark-rose transverse spots, each spot having an edge of deep-red dots.

Two specimens, 18 inches long, are in the collection.

21. *PLATYGLOSSUS DISPILUS*, n. sp.

D. $\frac{9}{11}$. A. $\frac{2}{12}$. L. lat. 28. L. transv. $\frac{2}{9}$. The height of the body equals the length of the head, and is contained four times and one-fourth in the total. Caudal fin rounded, with the lobes very slightly produced. Greenish olive, with a roundish black spot edged with silvery, on the lateral line, below the fifth and sixth dorsal spines ; the side of the head with five or six pearl-coloured streaks, some of which are continued on the body, forming a series of round spots. An oblong variegated blotch behind the pectoral fin : it is composed of three pearl-coloured stripes, enclosing two yellow bands, each of which has an undulated purple edge. No spot in the axil of the pectoral. A short oblique yellowish streak behind the base of each soft dorsal ray ; these streaks form a continuous band on the spinous portion. Anal fin with two or three whitish lines ; caudal with several irregular reddish longitudinal bands, which are convergent behind.

Young specimens are much more plain-coloured ; the black spot on the lateral line, however, is very distinct, and there is another at the root of the caudal.

Capt. Dow's collection contains a single young specimen ; but Mr. Salvin has brought a second, apparently adult, it being $5\frac{1}{2}$ inches long.

22. *PSEUDOJULIS NOTOSPILUS*, n. sp.

D. $\frac{9}{11}$. A. $\frac{3}{12}$. L. lat. 25. L. transv. $\frac{2\frac{1}{2}}{8}$. The height of the body is rather less than the length of the head, and contained four times and a quarter in the total. Dorsal spines pungent ; caudal fin slightly rounded. Brownish or yellowish olive ; young specimens with a silvery band along each side of the trunk, above the pectoral fin. Back with four or five indistinct broad brown cross bars ; a series of blotches on the dorsal fin corresponds to these cross bands, one of them, on the three first soft dorsal rays, being the largest and most distinct ; it is of a deep black colour, and of an ovate form. The corners of the caudal fin are white ; ventral whitish, with a broad blackish outer margin.

One adult specimen, 4 inches long, and several young ones are in the collection.

23. *JULIS LUCASANA*, Gill.

24. *DINEMATICTHYS MARGINATUS*, Ayres.

25. *MICRODESMUS DIPUS*, n. g. et sp. Of this we have received only a single small example; and as it is not in a perfect state of preservation, we cannot decide whether it should be referred to the Blennoids or Gadoids, or whether it is the type of a distinct family. However, we may hope that Capt. Dow will succeed in obtaining more specimens.

MICRODESMUS.

Body much elongate, eel-like, covered with rudimentary scales; head rather short, with obtuse snout, narrow cleft of the mouth, and prominent lower jaw. Eyes minute. Teeth in both jaws minute; palate toothless. The gill-opening is reduced to a small slit in front of the pectoral fin. Vertical fins united by a membrane, but the caudal can be easily distinguished from the two other fins. Dorsal fin very long, composed of flexible, undivided rays, like the anal. Pectorals short; ventrals thoracic, each reduced to a single ray. Vent in the middle of the total length.

MICRODESMUS DIPUS.

D. 55. A. 34. C. 16. P. 12. V. 1. The depth of the body is about one-eighteenth of the total length; the length of the head one-eleventh. The head is rather compressed, the snout short, the mouth very narrow, and the lower jaw very prominent. The minute eye is lateral and in the anterior third of the length of the head. The dorsal fin commences at a distance from the occiput which is somewhat less than the length of the head; it is nearly even, and the rays are very distinct, the interradiation membrane being thin and transparent. The anal fin commences immediately behind the vent. The caudal rays are much more slender and more closely set than those of the dorsal and anal; the caudal fin is rounded, two-thirds of the length of the head. Pectorals as long as the ventrals, and half as long as the head; the latter fins are close together, and inserted a little behind the root of the pectoral. Upper parts uniform brownish olive.

The single specimen is $4\frac{1}{2}$ inches long.

26. *ANABLEPS DOVII*, Gill.

II. *Species collected at Colon.*

1. *PRISTIPOMA MELANOPTERUM*, Cuv. & Val.
2. *POMACANTHUS PARU*, Gthr.
3. *SPHYRÆNA PICUDA*, Bl. Schn.

III. *Species from the Lake of Managua, Nicaragua.*

1. *HEROS LABIATUS*, n. sp.

D. $\frac{17}{11}$. A. $\frac{8}{8}$. L. lat. 32. L. transv. $\frac{6}{13}$. The anterior portions of the upper and lower lips are much enlarged, each forming a

moveable subtriangular flap. The height of the body is somewhat more than the length of the head, and two-fifths of the total. The mouth is very protractile; the eye occupies the middle of the length of the head. Scales on the cheek in four series. Base of the dorsal almost scaleless. Uniform red, or sometimes red irregularly mottled with black.

The largest specimen is 7 inches long.

MISCELLANEOUS.

Species of Mollusca obtained in Corunna Bay, by R. M'ANDREW, F.R.S., F.L.S., and H. WOODWARD, F.G.S., F.Z.S., in May 1863.

CEPHALOPODA.

Loligo media, Linn. In market. | *Sepia officinalis, Linn.* Ditto.

GASTEROPODA.

- | | |
|---|--|
| <p><i>Murex erinaceus, Linn.</i> Frequent.
 — <i>corallinus, Scacchi.</i> Ditto.
 — <i>Edwardsii, Menke.</i> Rare.
 <i>Triton nodiferus, Lam.</i> On shore, dead.
 — <i>cutaceus, Lam.</i> Ditto.
 <i>Nassa reticulata, Linn.</i> Frequent.
 — <i>incrassata, Müll.</i> Ditto.
 — <i>pygmæa, Lam.</i> Ditto.
 <i>Ringicula auriculata, Menke.</i> Do.
 <i>Purpura lapillus, Linn.</i> Ditto.
 — <i>hæmastoma.</i> On the shore, dead.
 <i>Cassis saburon?, Lam.</i> 2 living; agrees exactly with Reeve's description and figure; but locality given for latter, <i>Japan.</i>
 <i>Mangelia Philberti, Michaud.</i> On shore, dead; not frequent (<i>purpurea, var.?</i>)
 — <i>attenuata, Mont.</i> Rare.
 — <i>costata, Pennant.</i> Ditto.
 — <i>nebula, Mont.</i> Ditto.
 — <i>elegans, Scacchi.</i> 1 specimen, dead.
 — <i>septangularis, Mont.</i> Shore, dead.
 — <i>Lefroyii, Michaud.</i> Rare.
 — <i>lævigata, Phil.</i> Ditto.
 — <i>brachystoma, Phil.</i> Ditto.
 — <i>linearis, Mont.</i> Ditto.
 <i>Mitra, sp.,</i> large size. Various</p> | <p>worn and imperfect specimens on the shore.
 <i>Cypræa Europææ, Mont.</i> On the shore, abundant; some specimens of remarkably small size.
 — <i>candidula, Gaskoin.</i> Frequent on shore in one particular locality. The species inhabits the Madeira and Canary Islands, but has not hitherto been obtained in any other European locality.
 <i>Erato lævis, Donovan.</i> Frequent on the shore.
 <i>Natica monilifera, Lam.</i> Rare.
 — <i>nitida, Don.</i> Frequent.
 — <i>n. sp.</i> One specimen living.
 <i>Chemnitzia elegantissima.</i> On the shore; rare.
 <i>Eulima polita, Linn.</i> Ditto.
 <i>Cerithium reticulatum, Da Costa.</i> Frequent.
 <i>Turritella communis, Risso.</i> Not common.
 <i>Scalaria communis, Lam.</i> Not frequent.
 — <i>Turtoni, Turton.</i> Ditto.
 — <i>crenata, Linn.</i> Ditto.
 <i>Littorina rudis, Don.</i> Frequent.
 — <i>saxatilis, Johnston.</i> Ditto.
 — <i>littorea, Linn.</i> Ditto.
 — <i>littoralis, Linn.</i> Rare.</p> |
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